

Curriculum Vitæ

François-Michel Boire

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Education

Ph.D., Financial Modelling, Western University	2022
Department of Statistical and Actuarial Sciences, London, ON, Canada	
Dissertation: “Essays on Least-Squares Monte Carlo Variance and Bias Reduction Methods”; advisors: Dr. Lars Stentoft, Dr. R. Mark Reesor	
M.Sc., Financial Engineering, HEC Montréal	2017
Department of Decision Sciences, Montreal, QC, Canada	
Dissertation: “US House Price Risk: Searching for Heterogeneity Using Panel Quantile Regression”; advisor: Dr. Simon van Norden	
B.Sc., Mathematics and Economics, Université de Montréal	2015
Department of Economics, Montreal, QC, Canada	
Student exchange: University of British Columbia, Vancouver, BC, Canada	

Internship

Ph.D. Trainee, Model Development and Research, Bank of Canada	2019
Financial Stability Department, Ottawa, ON, Canada	
Project: “Shaping the Future: Policy Shocks and the GDP Growth Distribution”; supervisors: Dr. Thibaut Duprey, Dr. Alexander Ueberfeldt	

Teaching Experience

Graduate Teaching Assistant, Western University:

Undergraduate and graduate courses in Statistics and Finance; led lectures and programming labs, designed and graded assignments and exams.

Financial Modelling I	2019, 2021
Introduction to R/Intermediate R Workshops	2021
Applied Statistics and Data Analysis for Engineers	2021
Corporate Finance	2020
Statistics for Science	2017, 2018, 2020
Monte Carlo Methods and Financial Applications (graduate)	2020
Probability and Statistics I	2017

Instructor, SOS Tutoring:

Business Administration courses for HEC Montréal undergraduates; led intensive exam preparation lectures for sections of over 70 students.

Statistics	2017
Introduction to Business Analytics	2016

Teaching Fields and Research Interests

Teaching fields:	Research interests:
Statistical inference	Quantitative finance
Time series econometrics	Derivatives pricing
Financial modelling	Econometrics
Monte Carlo methods in financial engineering	Statistical learning

Grants

Ontario Graduate Scholarship (CAD \$15000 per year) Government of Ontario	2019, 2020, 2021
Master's Admission Grant (CAD \$2000) HEC Montréal	2015
Mobility Grant for Student Exchange (CAD \$6000) Québec Ministry of Higher Education, Research and Science	2014–2015

Awards and Honours

Graduate Student Teaching Award (CAD \$500) Faculty of Science, Western University	2021
Graduate Teaching Assistant Award (CAD \$200) Department of Statistical and Actuarial Sciences, Western University	2019
Best Presentation in Actuarial Science and Finance (CAD \$500) 1st Waterloo Student Conference of Statistics	2019
Dean's List Faculty of Arts and Science, Université de Montréal Graduated with mention of excellence	2012–2015

Other Training

SoFiE Summer School: The Econometrics of Derivatives Markets Kellogg School of Management, Northwestern University (online)	2021
SHARCNET Summer School: Parallel Programming with MPI Western University (online)	2021
Fields-CFI Bootcamp: Machine Learning for Quantitative Finance Fields Institute for Research in Mathematical Sciences (online)	2021
Fields Bootcamp: Machine Learning for Finance Fields Institute for Research in Mathematical Sciences	2019
Stanford Online: Statistical Learning (completed with distinction) Stanford Center for Professional Development (online)	2018
SHARCNET Summer School: High Performance Computing Western University	2018
Semaine d'Étude Maths-Entreprises (SEME Hauts-de-France) Université de Lille	2017

Service

Reviewer, 2019 National Scholarship Program, Western University

Programming Experience

R, MATLAB, Python (Keras and TensorFlow libraries), Maple, shell scripting, L^AT_EX

Memberships

The Society of Financial Econometrics (SoFiE)	2021–present
The Econometrics Society	2021–present
Statistical Society of Canada (SSC)	2019–present

Other Information

Citizenship: Canadian

Languages: English, French

Publications

Peer-reviewed:

1. Boire, François-Michel, R. Mark Reesor, and Lars Stentoft. 2021. “Efficient Variance Reduction for American Call Options Using Symmetry Arguments” *Journal of Risk and Financial Management* 14, no. 11: 504. (<https://doi.org/10.3390/jrfm14110504>)
2. Boire, François-Michel, R. Mark Reesor, and Lars Stentoft. 2021. “American Option Pricing with Importance Sampling and Shifted Regressions” *Journal of Risk and Financial Management* 14, no. 8: 340. (<https://doi.org/10.3390/jrfm14080340>)

Working papers:

1. Boire, François-Michel, Thibaut Duprey, and Alexander Ueberfeldt. “Shaping the Future: Policy Shocks and the GDP Growth Distribution” [previously titled “Distributional Response to Fiscal Stimulus”] Staff Working Papers 21-24, Bank of Canada. No. 2021-24. Bank of Canada, 2021. (<https://www.bankofcanada.ca/2021/05/staff-working-paper-2021-24/>)
Presented at: EcoMod2021*, CSSC 2021, EEA Congress, Midwest Macro Meetings, Waterloo Student Conference of Statistics
2. Boire, François-Michel, Simon van Norden. “Modeling Systemic House Price Risk” [previously titled “US House Price Risk: Searching for Heterogeneity Using Panel Quantile Regression”]. 2017. (https://www.wiwiw.fu-berlin.de/forschung/veranstaltungen/rse/Papers/Papers_Summer_2017/Systemic_Housing_Price_Risk.pdf)
Presented at: Lancaster University Management School*, NIESR*, Bank of Canada*, Bank of England*, Freie Universität Berlin*

In preparation:

1. Boire, François-Michel, R. Mark Reesor, and Lars Stentoft. “Foresight Bias in the Least-Squares Monte Carlo Algorithm”
2. Boire, François-Michel, R. Mark Reesor, and Lars Stentoft. “Monte Carlo Variance Reduction and American Option Exercise Strategies”

*: Presented by co-author

Presentations

1. ASSA 2022 Virtual Annual Meeting (American Economic Association), January 7-9, 2022, Online: “Shaping the Future: Policy Shocks and the GDP Growth Distribution” (poster session)
2. 2nd Waterloo Student Conference of Statistics, Actuarial Science and Finance, November 5-6, 2021, Waterloo, Ontario, Canada: “Foresight Bias in the Least-Squares Monte Carlo Algorithm”
3. 9th Annual Canadian Statistics Student Conference, June 4, 2021, Online: “A Hybrid Model of Conditional Value at Risk and Structural Vector Auto Regression”
4. Academy of Finance 2021 Conference, March 24-26, 2021, Chicago, Illinois, USA: “Efficient Variance Reduction with Least-Squares Monte Carlo Pricing” (discussant)
5. European Economic Association Congress, August 26-28, 2020, Online: “Distributional Response to Fiscal Stimulus”
6. 8th Annual Canadian Statistics Student Conference, May 30, 2020, Online: “Detecting Breast Tissue Anomalies in Mammograms with Convolutional Neural Networks”
7. Midwest Macro Meetings, November 1-3, 2019, East Lansing, Michigan, USA: “Distributional Response to Fiscal Stimulus”
8. 1st Waterloo Student Conference of Statistics, Actuarial Science and Finance, October 18-19, 2019, Waterloo, Ontario, Canada: “Distributional Response to Fiscal Stimulus”

References

Lars Stentoft (Ph.D. advisor)
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Thibaut Duprey (internship supervisor)
Director, Model Development and Research
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Simon van Norden (M.Sc. advisor)
Professor
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(514) 340-6781